



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,318	09/16/2003	William Facinelli	H0004341	4181

128 7590 09/20/2004

HONEYWELL INTERNATIONAL INC.  
101 COLUMBIA ROAD  
P O BOX 2245  
MORRISTOWN, NJ 07962-2245

EXAMINER

BASINGER, SHERMAN D

ART UNIT	PAPER NUMBER
----------	--------------

3617

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/664,318	<b>Applicant(s)</b> FACINELLI ET AL. <span style="float: right;">ST</span>	
	<b>Examiner</b> Sherman D. Basinger	<b>Art Unit</b> 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/16/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The declaration filed under 37 C.F.R. 1.63 in response to the notice of a missing or unsigned declaration has been received.
2. The declaration filed March 26, 2004 has also been received.

### ***Drawings***

3. The drawings are objected to because the lines, numbers and letters are not uniformly thick and well defined. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. In paragraph [0018] “100 to 110” should be corrected to “110-120”. This provides antecedent basis for what is claimed in claim 2.

***Claim Objections***

5. Claims 3, 7, 10, 12, 14 and 16 are objected to because of the following informalities: see below. Appropriate correction is required.

The following have no clear antecedents: the total weight of claim 3; said interior surface of claim 7; said stator hub and said downstream end of claim 10; said internal diameter of claim 12; said distance of claim 14; and said interior surface of claim 16.

6. Applicant is advised that should claims 12 and 14 be found allowable, claims 18 and 19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 8, 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Broinowski.

The rotor with five blades is 33, the stator with 8 blades is 35, the first housing section is 14, the second housing section is 16, and as is shown in figure 1, the stator hub extends downstream of the downstream end of the second housing section.

The housing section 16 is considered due to its taper to define a combined stator housing and nozzle. Note that the second housing tapers from an upstream end having a first diameter to a downstream end having a second diameter that is smaller than the first diameter.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-7, 9, 11-16 and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broinowski.

Broinowski does not disclose that the total weight of the rotor blades is about 114 pounds, that the total blade area of the rotor blades is about 854 square inches; that the clearance between the tips of the rotor blades and the interior surface of the first housing section is approximately 0.050 inches; that the internal diameter at the downstream end of the second housing section is about 8.85 inches; that the distance from a trailing end of the stator blades and a downstream end of the second housing section is in the range of about 1.29 inches, that the pressure rise in the propulsion unit is approximately 99.4 ft H<sub>2</sub>O at approximately 16 mph speed of the watercraft, that the water flow is between approximately 95 to 105 ft<sup>3</sup>/sec at approximately 16 mph

watercraft speed, that the loading on the rotor blades is non-uniform and that the loading on the tip area of the rotor blade is greater than the loading on the hub area of the rotor blade.

However, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to design the jet propulsion unit of Broinowski such that the total weight of the rotor blades is about 114 pounds, that the total blade area of the rotor blades is about 854 square inches; that the clearance between the tips of the rotor blades and the interior surface of the first housing section is approximately 0.050 inches; that the internal diameter at the downstream end of the second housing section is about 8.85 inches; that the distance from a trailing end of the stator blades and a downstream end of the second housing section is in the range of about 1.29 inches, that the pressure rise in the propulsion unit is approximately 99.4 ft H<sub>2</sub>O at approximately 16 mph speed of the watercraft, that the water flow is between approximately 95 to 105 ft<sup>3</sup>/sec at approximately 16 mph watercraft speed, that the loading on the rotor blades is non-uniform and that the loading on the tip area of the rotor blade is greater than the loading on the hub area of the rotor blade.

The weight of the rotor blade, the total blade area, the internal diameter at the down stream end of the second housing section, the distance between the trailing end of the stator blades and a downstream end of the second housing and the clearance between the tips of the rotor blades and the interior surface of the first housing section are dependent on the material used to make the rotor blades, the size of the rotor blades, the size of the stator, the size of the second housing and the precision used in making the rotor, its blades and its housing. Thus, motivation to make the weight of the rotor blade, the total blade area, the internal diameter at the down stream end of the second housing section and the clearance between the tips of the rotor blades and the interior

surface of the first housing section as claimed depend on how big and heavy one or ordinary skill in the art chooses to make the rotor, its blades and its housing. It also depends on how much one is willing to pay to machine or manufacture the rotor and its housing.

The loading on the blades, the pressure rise in the propulsion unit and the water flow in the propulsion unit again depends on the size of the unit and the amount of power provided to the unit to turn the rotor. These again are decisions made by one having ordinary skill in the art in accordance with what type of performance is desired and how much one is willing to invest to obtain a particular performance. Motivation to provide the claimed loading on the blade, the claimed pressure rise and the claimed water flow is found in one's desire to get a certain amount of performance from the unit at a certain cost.

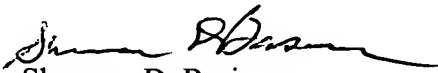
### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackson, III is cited to show how the pintle body extends beyond the section for the stators 24. Furst is cited to show the fixed portion 8 extending beyond the section 10.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sherman D. Basinger  
Primary Examiner  
Art Unit 3617  
9/15/04

sdb  
9/14/04